WILDLIFE MANAGEMENT AND RESEARCH NOTES

No.		DATE
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	TITLE: 2012 Bovine Tuberculosis Surveillance & Monitoring Summary	

Abstract: *Bovine Tuberculosis (TB) is a chronic bacterial infection that can affect most mammals. In 2009, three captive cervid farms had animals that tested positive for TB, with all animals originating from one location in Northwest Franklin County. To ensure that the disease did not escape into the wild deer population, the Division of Fish and Wildlife and their collaborators, implemented a surveillance program to test hunter harvested deer in the locations near the three captive cervid farms. An additional cattle farm tested positive in 2011, expanding surveillance efforts into Dearborn County. None of the 229 deer sampled in Franklin, Fayette, and Dearborn counties in 2012 tested positive for TB. Since 2009, 1,209 deer have been sampled for TB in Indiana.*

Bovine Tuberculosis (TB) is a chronic bacterial disease caused by the bacterium *Mycobacterium bovis*, and can affect nearly any mammal. *M. bovis* is most commonly transmitted by inhalation of aerosols or by ingestion. TB is most commonly maintained in cattle, but several species can propagate the disease, and are classified as reservoir hosts. These species make eradication of the disease difficult. In Michigan, white-tailed deer appear to be reservoir hosts, and significantly complicate eradication efforts.

In 2009, deer in a captive cervid farm in Franklin County tested positive for TB. Investigations conducted by the Indiana Board of Animal Health (BOAH) determined that two additional farms obtained cervids from the Franklin County farm, one each in Harrison and Wayne Counties. Further testing within these herds and subsequent depopulation found that the disease had not spread to other captive animals. Results from sampling free range deer in 2009 failed to detect the presence of TB. Still, the Division of Fish and Wildlife (DFW), the BOAH, and the United States Department of Agriculture (USDA) decided to continue its efforts to collect tissue samples from free ranging deer in Franklin and Fayette counties in 2011 to monitor if the disease had spread to wild deer.

Additionally, a cattle farm in northern Dearborn County had 4 cattle test positive for the same strain of TB in 2011. Additional cattle were determined to be positive after the herd was depopulated. Due to this significant finding, additional resources were expanded into Dearborn County similarly to the efforts in Franklin and Fayette County to monitor for the disease in wild deer.

DFW staff manned 1 check station in Franklin, Fayette, and Ripley counties, as well as 3 check stations in Dearborn County during the opening weekend of firearms season, to voluntarily collect deer heads from hunters. Tissue samples from the heads were prepared for submission to the National Veterinary Services Laboratory (NVSL) in Ames, Iowa by BOAH and USDA personnel. A total of 229 deer heads were collected, with 93 coming from Dearborn County, 32 coming from Fayette County, 101 coming from Franklin County, and 3 coming from just outside of the targeted surveillance area.

Analysis of the samples by NVSL indicated that TB was not been detected in any of the collected deer. Hunters in these regions are still encouraged to report any harvested deer that exhibit symptoms of TB (white lesions on the internal organs or ribcage of harvested deer) to their local district wildlife biologist or the Indiana Board of Animal Health. Since 2009, 1,207 deer have been specifically sampled for TB in Indiana, with no positives detected.